

REMARKS

The Examiner's Action mailed on January 19, 2007, has been received and its contents carefully considered. Reconsideration of the final rejections presented therein is requested for at least the following reasons.

In this Response, Applicants have made no amendment, and claims 1-20 remain pending in the application. For at least the following reasons, it is submitted that this application is in condition for allowance.

Applicants wish to thank the Examiner for allowing claims 14-20.

Claims 1-13 were rejected under 35 U.S.C. 103(a) as being obvious over Applicants' prior art FIG. 1 and 2 and 'Description of the Related Art' in view of *Grave* (U.S. 6,144,359), and further in view of *McCartney, Jr. et al.* (U.S. 5,831,693). This rejection is respectfully traversed.

Claim 1 recites:

1. A transreflective liquid crystal display device, comprising:
 - a display panel having a viewing area, wherein the viewing area comprises a transmissive region and a reflective region;
 - a backlight device disposed under the display panel, wherein the backlight device provides a backlight passing through the transmissive region;

a power management controller connected with the backlight device, wherein the power management controller controls an intensity of the backlight; and

at least one photodetector located on the display panel outside the viewing area, wherein the photodetector detects an intensity of ambient light around the display panel, and then provides a corresponding signal to the power management controller to control the intensity of the backlight;

wherein, by the power management controller based on the corresponding signal, the intensity of the backlight automatically becomes greater when the intensity of the ambient light becomes lower, and the intensity of the backlight automatically becomes lower when the intensity of the ambient light becomes greater, *maintaining a total amount of light at a desired level, said total amount consisting of a first part of ambient light reflected from the reflective region and a second part of the backlight passing through the transmissive region.*

(Emphasis Added)

It is clear that in the transflective liquid crystal display device according to claim 1 the power management controller controls the intensity of the backlight, based on the corresponding signal, so that the intensity of the backlight

automatically becomes greater when the intensity of the ambient light becomes lower, and the intensity of the backlight automatically becomes lower when the intensity of the ambient light becomes greater, *while the total amount of reflected and transmitted light is maintained at a desired level.*

The Office Action rejects the claims on prior grounds. The applicant believes, with all due respect, that the rejections do not comply with the requirements of MPEP §707.07 and in particular MPEP §707.07(d), which requires the grounds for rejection be "fully and clearly stated". For example, page 5 of the Office Action states that "Grave teaches ... maintaining a total amount of light at a desired level, said total amount of light consisting of a first part of ambient light reflected from the reflective region and a second part of the backlight passing through the transmissive region (col. 2, lines 37-40)".

However, "maintaining a total amount of light at a desired level, said total amount consisting of a first part of ambient light reflected from the reflective region and a second part of the backlight passing through the transmissive region" is not found in Col. 2, lines 37-40 of Grave. Indeed, in Col. 2, lines 37-40, Grave teaches only that "Display device 100 is adapted to provide a high contrast display image using a combination of reflected ambient light and light generated from backlight 130."

Hence, the text actually quoted in the Office Action does not read onto the claimed feature recited in claim 1 that it is alleged to show. The rejection therefore fails to comply with the standard that substantial evidence should be shown for

every element claimed. For this reason alone, the rejection should be withdrawn. Should an ensuing Office Action be mailed, which provides more detail in this regard. Applicants submit that such an Action should be made non-final.

In order for a claim to be properly rejected under 35 U.S.C. §103, the teachings of the prior art reference must suggest all features of the claimed invention to one of ordinary skill in the art. See, e.g., *In re Dow Chemical*, 837 F.2d 469, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988); *In re Keller*, 642 F.2d 413, 208 U.S.P.Q. 871, 881 (C.C.P.A. 1981).

Applicant again submits that the claim 1 is allowable over the cited references because the prior art references do not teach or suggest all features of the claimed invention to one of ordinary skill in the art.

Referring to Col. 4, lines 25-33, Grave discloses:

Transflective-type display device 100 provides a number of advantages over conventional transflective display devices. For example, the luminance levels necessary to achieve a desired contrast under a variety of ambient light conditions is significantly easier to achieve. Further, since approximately 85 percent of light from backlight 130 can be transmitted by transflector 120 during night mode operations, ***power consumption by backlight 130 in the night mode is significantly reduced.***

It is clear that *Grave* teaches controlling a backlight to reduce power consumption. *Grave*, however, does not teach or suggest "wherein, by the power management controller based on the corresponding signal, the intensity of the backlight automatically becomes greater when the intensity of the ambient light becomes lower, and the intensity of the backlight automatically becomes lower when the intensity of the ambient light becomes greater, *maintaining a total amount of light at a desired level, said total amount consisting of a first part of ambient light reflected from the reflective region and a second part of the backlight passing through the transmissive region*" as recited in claim 1.

Specifically, the important feature of "maintaining a total amount of light at a desired level, said total amount consisting of a first part of ambient light reflected from the reflective region and a second part of the backlight passing through the transmissive region" is neither disclosed in *Grave* nor in Applicants' prior art FIG. 1 and 2 and 'Description of the Related Art', nor in *McCartney, Jr. et al.*

Applicant therefore submits that even when taken in combination, Applicants' prior art FIG. 1 and 2 and 'Description of the Related Art' and *Grave* and *McCartney, Jr. et al.* fail to teach or suggest all of the limitations recited in previously presented claim 1. For at least this reasons, claim 1 is allowable over the cited references. Reconsideration of this rejection is hereby respectfully requested.

Claim 9 recites:

9. A method of fabricating a transflective liquid crystal display device, comprising the steps of:

providing a first substrate having a viewing area and a peripheral area, wherein the viewing area comprises a transmissive region and a reflective region;

disposing a backlight device under the first substrate, wherein the backlight device provides a backlight passing through the transmissive region;

providing a power management controller connected with the backlight device, wherein the power management controller controls an intensity of the backlight; and

forming at least one photodetector on the first substrate in the peripheral area, wherein the photodetector detects an intensity of ambient light above the first substrate, and then provides a corresponding signal to the power management controller to control the intensity of the backlight;

wherein, by the power management controller based on the corresponding signal, the intensity of the backlight automatically becomes greater when the intensity of the ambient light becomes lower, and the intensity of the backlight automatically becomes lower when the intensity of the ambient light becomes greater, *maintaining a total amount of light at a desired level, said total amount consisting of a*

first part of ambient light reflected from the reflective region and a second part of the backlight passing through the transmissive region.

(Emphasis Added)

More particularly, in the transflective liquid crystal display device as recited in claim 9 "by the power management controller based on the corresponding signal, the intensity of the backlight automatically becomes greater when the intensity of the ambient light becomes lower, and the intensity of the backlight automatically becomes lower when the intensity of the ambient light becomes greater, *maintaining a total amount of light at a desired level, said total amount consisting of a first part of ambient light reflected from the reflective region and a second part of the backlight passing through the transmissive region*".

For like reasons as described with respect to claim 1, Applicants' prior art FIG. 1 and 2 and 'Description of the Related Art', Grave and McCartney, Jr. et al., whether taken separately or in combination, also fail to teach or suggest the above-recited feature of claim 9.

Applicant therefore submits that the art of record fails to teach or suggest all of the limitations recited in claim 9. For at least this reason, claim 9 is allowable over the cited references. Reconsideration of this rejection is hereby respectfully requested.

Claims 1 and 9 are independent claims, from which claims 2-8 and 10-13 respectively depend. Amended claims 1 and 9 are patentable for the reasons discussed, and therefore claims 2-8 and 10-13 are patentable for at least the same reasons.

It is submitted that this application is in condition for allowance. Such action and the passing of this case to issue are requested.

Should the Examiner feel that a conference would help to expedite the prosecution of this application, the Examiner is hereby invited to contact the undersigned counsel to arrange for such an interview.

Should any fee be required, however, the Commissioner is hereby authorized to charge the fee to our Deposit Account No. 18-0002, and advise us accordingly.

Respectfully submitted,



April 19, 2007
Date

Alun L. Palmer – Reg. No. 47,838
RABIN & BERDO, PC – Cust. No. 23995
Facsimile: 202-408-0924
Telephone: 202-371-8976

ALP/atl

AMENDMENT

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